

EFFICIENT GENERIC CODE IN A DYNAMIC EXECUTION ENVIRONMENT

Abstract of the Invention

Efficient and flexible support for parametric polymorphism in a dynamic execution environment is provided. The addition of efficient parametric polymorphism in a dynamic execution environment expands the support of features of various source languages in intermediate language code. Dynamic allocation of typing context data and support tables at runtime optimizes memory requirements and performance in a dynamic execution environment. As typing-context-relevant-code-points are executed within the program, indices are assigned to these code points and indexed slots in appropriate typing context data structures are allocated. As a typing-context-relevant-code-point is executed within a typing context, the indexed slot within the associated typing context data structure is filled in with typing context data. Such populated slots may be reused in subsequent execution of the code point within the same typing context to avoid re-computing the typing context data.